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TROUBLE REPORTING RECORDS AND PROCEDURES

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1. GENERAL

- 1.1 This section presents suggestions regarding the use of trouble records in effective operation and maintenance of a telephone system.
- 1.2 Accepted operating practices require that adequate trouble records be maintained as a tool for measuring the quality of telephone service. The most important objective is continuity of service. The following parts of this section describe forms and procedures for use in recording, handling and analyzing trouble reports.

2. TROUBLE TICKETS

- 2.1 Trouble reports originate from two sources: subscribers and employees. Subscriber-originated reports are generally considered as "complaints" and reports originating with employees as "discovered" cases. The sample trouble ticket, Exhibit A, provides space for entry of all essential information. The upper portion should be completed by the employee receiving the report or discovering the trouble. The lower portion should be completed by plant department employees. The plant account numbers or fault codes, as suggested, are associated with various plant accounts as prescribed by the Uniform System of Accounts. Many forms of trouble tickets are available and users should choose the most suitable form.

3. PLANT RECORD ENTRIES

- 3.1 Cable record forms and their use and application are covered elsewhere in this manual. When, during testing and clearance of trouble, it is determined that a cable pair is at fault, a descriptive note should be made on the cable record.
- 3.2 Various types of line and station cards and their use and application are also covered elsewhere in this manual. Most line and station cards provide space for trouble recording.

4. TROUBLE SUMMARY

- 4.1 After trouble data has been recorded on the line and station cards, trouble tickets should be sorted by "fault codes" and recorded on a trouble summary, Exhibit B. This permits computation of monthly totals for analysis. In general, a trouble summary form should

provide space for each fault code and include "carry overs", "repeat cases", and "elapsed time". After summarizing, trouble tickets should be filed for future reference.

- 4.2 Systems using subscriber carrier, radio, buried wire, telephone answering devices, private branch exchanges, key systems, etc., may want to provide space for such entries on the trouble summary and trouble analysis forms.

5. ANALYSIS OF TROUBLE REPORTS

- 5.1 An analysis of troubles should be made monthly and annually. Monthly analysis provides supervision and management with current information. Annual analysis will provide average figures with monthly and seasonal variations leveled off.
- 5.2 The analysis form, Exhibit C, provides a comparison of the current month's results with the same month of the previous year and the previous year's average results. Such comparisons indicate trends of trouble load, improvement or lack of improvement in trouble clearance procedures, and reveal deteriorating components of plant.
- 5.3 A complete trouble analysis may require map records as visual aids in indicating areas where troubles are occurring. Color coded pins used to indicate the fault code, on detail or key maps, suitably mounted, serve adequately. If an area becomes prominent because of the number of pins, a critical inspection of the area will reveal any plant weakness and what corrective action is required.

6. REPORT OF PLANT CONDITION

- 6.1 A form for recording dangerous plant conditions and other conditions requiring correction will prove of value in preventing accidents and service interruptions. All employees should be instructed to prepare a report when such a condition is noted. Dangerous plant conditions should receive immediate attention. The correction of other conditions can be included in routine preventive maintenance work. Exhibit D illustrates one type of form.

7. NOTICE OF VISIT

- 7.1 If the subscriber is not at home, good public relations result from leaving a notice of the visit. Exhibit E illustrates one form of notice.

8. APPLICATION

- 8.1 Class A and B systems may desire to use all suggested forms and procedures and provide for more detailed fault code classifications.
- 8.2 Class C and D systems may find that the use of trouble tickets and an annual summary will satisfy their requirements.

SAMPLE - USE OPTIONAL

TROUBLE TICKET							
Date <u>8/5/53</u> Time <u>10:00 AM-PM</u>		R <input checked="" type="checkbox"/> D <input type="checkbox"/>					
Exchange <u>FA 2</u>		Telephone No. <u>2224</u>					
Subscriber's Name <u>JOHN JONES</u>							
Subscriber's Address <u>RFD 3</u>							
Trouble Reported:		BC	BM	BW	CH	NDT <input checked="" type="checkbox"/>	ROH
		BD	BP	CBH	CO	OD	X
		BDR	BR	CGC	N	OF	XR
Remarks _____							
Terminal No. <u>101</u>		Pair No. <u>5</u>		Pole No. <u>A-1</u>			
Result of Test <u>SHORTED</u>							
Trouble Found <u>DROP BROKEN - TREE DOWN</u>							
Cleared By <u>RR</u> Date <u>8/5/53</u> Time <u>3:00 AM-PM</u>							
Time Elapsed - Days <u>-</u> Hours <u>5</u> Carried over <u>-</u>							
Repeated Cases <u>-</u> Line Card Posted <u>RR</u> Fault Code <u>233</u>							

(Suggested Size - 3 x 5 inches)

Notes:

- (1) Use of trouble abbreviations and fault codes conserves space and time when recording trouble reports on trouble tickets and line and station cards. Suggested abbreviations shown above are explained below. If these are not applicable or not used, the blank lines under "Remarks" can be used for writing in the particular type of trouble involved.

Trouble Abbreviations					
BC	Broken cord	BW	Broken Wire	NDT	No dial tone
BD	Broken drop	CBH	Can't be heard	OD	Out of order
BDR	Bells don't ring	CGC	Can't get Central	OF	Open fuse
BM	Broken mouthpiece	CH	Can't hear	ROH	Receiver off hook
BP	Broken pole	CO	Cuts out	X	Crossed
BR	Broken receiver	N	Noisy	XR	Cross ringing

Fault Codes	Plant Affected
241	Pole Line Plant
242	Cable Plant
243	Aerial Wire Plant
221	Central Office Equipment
231	Station Apparatus
232	Station Installation
233	Drop and Block Wires
0	Other
OK	OK on Test or Inspection

- (2) The above fault codes represent major plant accounts. They can be broken down into sub-accounts if desired. For example, cable plant could be divided between aerial, buried, and underground cable. Any system that will provide precise data as to the type of plant affected will serve.
- (3) The time elapsed between receiving the trouble report and clearing the trouble, and the number of uncleared troubles carried over from day to day are important items in evaluating trouble clearance efficiency and continuity of service.
- (4) Repeated cases of trouble should include all cases of trouble on the same affected line or telephone within the past 60 days. Such cases should be noted on the reverse of the trouble ticket, in detail, for attention of the wire chief or manager. They are obtained from the line and station card and are useful in uncovering weak plant components or inefficient repair work.

SAMPLE-USE OPTIONAL

MONTHLY SUMMARY OF TROUBLE REPORTS				
EXCHANGE		MONTH		YEAR
FAIRFAX		AUGUST		1953
FAULT	CODE	CLASSES OF PLANT	TROUBLE REPORTS-STROKE COUNT	TOTAL
POLE	241		TH III	8
LINE				
PLANT				
TOTAL POLE LINE PLANT				8
CABLE	242		TH TH II	12
PLANT				
TOTAL CABLE PLANT				12
AERIAL	243		TH TH TH	15
WIRE				
PLANT				
TOTAL AERIAL WIRE PLANT				15
CENTRAL	221		IIII	4
OFFICE				
EQUIP-				
MENT				
TOTAL CENTRAL OFFICE EQUIPMENT				4
STATION	231		TH TH IIII	14
APPARATUS				
TOTAL STATION APPARATUS				14
STATION	232		TH TH IIII	14
INSTALLA-				
TION				
TOTAL STATION INSTALLATION				14
DROP	233		III	3
AND				
BLOCK				
WIRE				
TOTAL DROP AND BLOCK WIRE				3
	O	OTHER	I	1
	OK	FOUND OK	III	3
TOTAL ALL REPORTS				74
CARRIED OVER 12 HOURS				4
CARRIED OVER 24 HOURS				
CARRIED OVER 36 HOURS				
TOTAL CARRIED OVER				4
NO. OF REPEAT CASES				1

(SUGGESTED SIZE - 8 1/2 x 11 INCHES)

- NOTES: (1) BLANK LINES PROVIDED IN EACH CATEGORY OF PLANT TO PERMIT MORE DETAILED BREAKDOWN OF TROUBLES, IF DESIRED.
- (2) IN CASE OF MULTI-EXCHANGE SYSTEMS, ONE SHEET CAN BE USED FOR EACH EXCHANGE AND ANOTHER SHEET FOR THE SYSTEM SUMMARY.
- (3) FREQUENCY OF TALLYING TROUBLE TICKETS ON THE SUMMARY CAN BE VARIED ACCORDING TO THE TROUBLE LOAD AND WORK SCHEDULE. WEEKLY POSTING WILL PREVENT A PEAK WORK LOAD AT MONTH'S END.

SAMPLE-USE OPTIONAL
ANALYSIS OF TROUBLE REPORTS

TOM Section 1238
EXHIBIT C

COMPANY FARMERSVILLE TELEPHONE COMPANY													MONTH AUGUST		YEAR 1953				
EXCHANGE		NUMBER OF TELEPHONES	TROUBLE REPORTS										TOTAL TROUBLE CASES	CARRIED OVER 12 HOURS	CARRIED OVER 24 HOURS	CARRIED OVER 36 HOURS	TOTAL CARRIED OVER	TOTAL REPEAT CASES	CASES PER 100 TELEPHONES
			241	242	243		221	231	232	233									
FAIRFAX	M	1480	8	10	15	4	14	14	3		1	3	72	4			4		5.0
	MY	1422	7	9	12	5	13	11	4		2	2	65	2	1		3		4.57
	Y	1460	11	10	13	5	14	10	4		2	3	72	3	1		4	1	4.93
ELMWOOD	M	340	2	2	4	2	6	4	1		1	1	23	2			2		6.76
	MY	318	1	2	3	1	5	3					15	1			1		4.7
	Y	326	1	2	4	1	6	3					17	1			1		5.21
	M																		
	MY																		
	Y																		
	M																		
	MY																		
	Y																		
SYSTEM TOTAL	M	1820	10	14	19	6	20	18	4		2	4	97	6			6		5.33
	MY	1740	8	11	15	6	18	14	4		2	2	80	3	1		4		4.6
	Y	1786	12	12	17	6	20	13	4		2	3	89	4	1		5	1	5.0

NOTE: M - MONTH COVERED BY REPORT MY - SAME MONTH LAST YEAR Y - LAST YEAR AVERAGE

Approved

MANAGER

(Suggested Size - 8½ x 11 inches)

SAMPLE-USE OPTIONAL

FARMERSVILLE TELEPHONE COMPANY
SYSTEM

REPORT OF DANGEROUS PLANT

☐

OR

NO. 1

REQUIRED PLANT IMPROVEMENT

☒

EXCHANGE: ELMWOOD DATE: 8/8/53

LOCATION: (Show Pole No., Terminal No., Street Address) _____
Pole A1-23 3 miles north of Elmwood

CONDITION TO BE CORRECTED: _____
Pole broken off

REPORTED BY RR

WORK AND MATERIAL REQUIRED TO CORRECT CONDITION: _____
New 20' C9 pole

WORK AUTHORIZED: Replace pole A1-23 with 20' C9 pole.

REFERRED TO: Jones DATE 8/9/53 WORK ORDER NO. 1

DATE COMPLETED: 8/15/53 COMPLETED BY: Jones

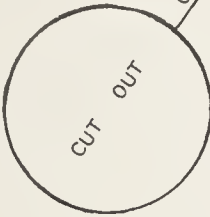
APPROVED: _____

USE BACK FOR SKETCH AND ADDITIONAL INFORMATION

(Suggested Size - $5\frac{1}{2}$ x $8\frac{1}{2}$ inches)

SAMPLE-USE OPTIONAL

"TROUBLE CALL NOTICE"



DATE _____

A SERVICE REPRESENTATIVE OF YOUR TELEPHONE
COMPANY CALLED TODAY TO:

☐ REPAIR YOUR TELEPHONE

☐ MOVE YOUR TELEPHONE

☐ INSTALL YOUR TELEPHONE

☐ INSPECT YOUR TELEPHONE

☐ _____

PLEASE CALL OUR OFFICE NO. 2-1234 AND ADVISE
WHEN YOU WILL BE HOME.

DISTRICT TELEPHONE COMPANY

(Suggested Size 3 x 5 inches)

For use of repairmen and installers.
Can be hooked on doorknob or slipped
under door.

